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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,109	06/27/2001	Yoshio Kurokawa	8373.245US01	4901

23552 7590 03/04/2005  
MERCHANT & GOULD PC  
P.O. BOX 2903  
MINNEAPOLIS, MN 55402-0903

EXAMINER

CHARLES, MARCUS

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/893,109

Applicant(s)

KUROKAWA ET AL.

Examiner

Marcus Charles

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This action is responsive to the RCE/Amendment filed 12-08-2005, which has been entered. Claim 1 is currently pending.

#### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP(07-83290) in view JP (05-586). JP(07-83290) discloses a low noise roller chain comprising a inner and outer links (13/14) with bushing (12) and a pin (11), rigid roller elastic rollers (16) arranged in a zig-zag pattern along the longitudinal direction of the chain (see fig.5). The elastic rollers is approximately 20% of an overall width of the roller assembly along the longitudinal axis of the of the roller assembly (see figs 2 and 4); as shown in figs 1-3, and 4-6, the thickness of the elastic roller is greater than that of the rigid roller (16) and having a uniform thickness through the width. JP(07-83290) is silent concerning the percentage ranges between the width of elastic roller and the roller assembly, and It should be noted that while the JP(07-83290) does not disclose any précised ranges or percentage ratio between the width and thickness of the elastic roller to the rigid roller either in the drawing or the specification. However, it appears that the width of the elastic roller to that of the rigid roller is about 13-45% and thickness of the elastic roller to the rigid roller is about 5-25%. Furthermore, the present disclosure does not disclose that such specific ranges solves any stated problems that would not otherwise be solved by ranges other than what is specified and it appears that the

rollers of JP(07-83290) (which appears to be very close to that of the present invention) would perform equally as well with the ranges being as close as they appear. In addition, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the size of the elastic roller of JP(07-83290) to obtain the claimed ratios ranges, since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. In addition, JP(07-83290) does not disclose the that the chain comprising two or more longitudinal chain portions of uniform lengths and the zig-zag pattern of one portion is opposite in phase to the zig-zag pattern of the adjacent portion. JP (05-586) discloses a roller chain with at least two adjacent portions (see attached drawing) each having elastic rollers in a zig-zag manner such that the zig-zag of one portion is opposite the zig-zag of the adjacent portion in order to reduce noise and balance the damping the rattling effect of the chain and sprocket during inadvertent lateral and axial movements of the chain with the sprocket. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the chain of JP(07-83290) so that the zig-zag pattern of one portion is opposite the zig-zag pattern of an adjacent portion in view of JP (05-586) in order to reduce noise and balance the damping the rattling effect of the chain and sprocket during inadvertent lateral and axial movements of the chain with the sprocket.


**Conclusion**

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP(2002-13596), JP(2002-13601) and JP92000-65157) disclose a roller chain with zig-zag damping elastic rings.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (703) 305-6877. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Marcus Charles  
Primary Examiner  
Art Unit 3682  
February 09-2005